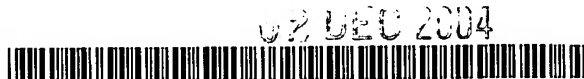


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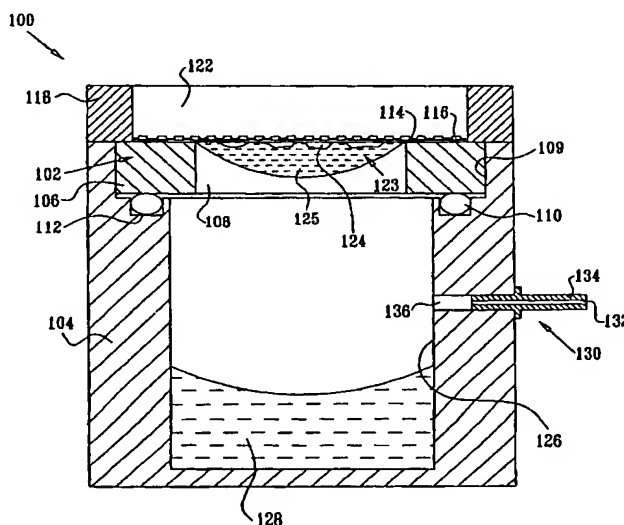
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[Continued on next page]

(54) Title: **LOW-PRESSURE CHAMBER FOR SCANNING ELECTRON MICROSCOPY IN A WET ENVIRONMENT**



(57) Abstract: A specimen enclosure assembly (100) for use in an electron microscope and including a rigid specimen enclosure dish (102) having an aperture (122) and defining an enclosed specimen placement volume (125), an electron beam permeable, fluid impermeable, cover (114) sealing the specimen placement volume (125) at the aperture (122) from a volume outside the enclosure and a pressure controller communicating with the enclosed specimen placement volume (125) and being operative to maintain the enclosed specimen placement volume (125) at a pressure, which exceeds a vapor pressure of a liquid sample (123) in the specimen placement volume (125) and is greater than a pressure of a volume outside the enclosure, whereby a pressure differential across the cover (114) does not exceed a threshold level at which rupture of the cover (114) would occur.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL03/00455

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : H01J 37/00, 37/26, 37/252

US CL : 250/310, 311, 306, 440.11, 441.11

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 250/310, 311, 306, 440.11, 441.11

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,130,434 A (MITCHELL et al) 10 October 2000 (10.10.2000), column 5, lines 13-29; claim 1.	1-20
A	US 4,705,949 A (GRIMES, II et al) 10 November 1987 (10.11.1987), Abstract; column 3, line 49 - column 4, line 14.	1-20

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

21 August 2003 (21.08.2003)

Date of mailing of the international search report

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Pene Pator

INTERNATIONAL SEARCH REPORT

PCT/IL03/00458

Continuation of B. FIELDS SEARCHED Item 3:

EAST: BRS and IS&R

search terms: (electron adj microscope) and specimen and (electron adj beam); ((electron adj microscope) and specimen and (electron adj beam)) and (liquid adj sample)